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## Maiden harvest of cultured Silver Pompano at Andhra Pradesh

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## Marine Fisheries Census 2010 Released

see back cover



हर कदम, हर डगर  
किसानों का हमसफर  
भारतीय कृषि अनुसंधान परिषद

*Agrisearch with a human touch*



**CENTRAL MARINE FISHERIES RESEARCH INSTITUTE**  
P.B. No. 1603, Ernakulam North P.O., Cochin - 682 018



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### About CMFRI

The Central Marine Fisheries Research Institute, Cochin, is a premier research Institute under the Indian Council of Agricultural Research, devoted to research and training in marine fisheries and mariculture.

CMFRI has three Regional Centres viz., Mandapam Camp, Visakhapatnam and Veraval and seven Research Centres located along the Indian coastline, catering to the marine fishery policy needs of all maritime states of the country.



## DIRECTOR SPEAKS

Dear Colleagues,

We are glad to note that at Mangalore we have moved into our own building premises thus adding our strength of infrastructure. This will definitely give great strength to expand our research programmes of our Mangalore RC to cater to the needs of the marine fisheries sector of Karnataka.



Our efforts to augment the production from the seas got a boost when we harvested the pompano transported from Mandapam and stocked in a farmer's pond in Antervedi in Andhra Pradesh. The pompano seedlings withstood the stress of transport over a distance of 1200km and maintained 95% survival rate. We were able to harvest good quantity of fish under the public-private-participatory (PPP) mode. All our scientific, technical, supporting staff associated with this venture deserves full compliments.

Our research projects for the 12<sup>th</sup> Plan have been formulated based on series of discussions held during the last two years and have focused our identified our priority areas in the most fitting way. We will put forward all our sincere efforts to carry out these projects with commitment to take them to the policy level for the marine fisheries sector.

With best wishes,

**Dr. G. Syda Rao**  
Director





## Maiden harvest of cultured Silver Pompano at Andhra Pradesh

Another milestone  
in Mariculture  
achieved by  
Mandapam RC

FCR 1:1.8



Harvested Pompano

Among the many high value marine tropical finfish that could be farmed in India, the silver pompano, *Trachinotus blochii* is one of the top most, mainly due to its fast growth rate and high market demand. Very few countries are successful in breeding this fish and the entire world production through culture

is only about 300 tonnes. The Central Marine Fisheries Research Institute has initiated aquaculture research on pompano from the year 2008. The first development, induced breeding and

larval production of silver pompano is now successfully accomplished for the first time in India at Mandapam Regional Centre of CMFRI. After the successful larval rearing they were transported by



Shri K. Narayana Rao, Hon'ble M.P., Machilipatnam,  
inaugurating the Pompano harvest





Dr. G. Syda Rao, Director, CMFRI addressing the gathering

road in the second week of August 2011 from Mandapam, near Rameswaram in Tamil Nadu to Antervedi in the East Godavari District of Andhra Pradesh at a distance of 1200 km and stocked in one acre pond of a farmer. About 3,600 seeds were stocked and fed with indigenous pellet feed and maintained good pond environment, resulting in a survival of more than 95%. The formulated pellet

feed cost is about Rs 35/kg. An FCR of 1:1.8 was achieved in this crop. During the course of 8 months they reached a size range of 450-550 g weight, which is an excellent table size for marketing. This fish tolerates wide salinity range from 5 ppt to 35 ppt and can feed at all angles, which makes it a versatile and most aquaculture friendly species. Karnataka Fisheries Development Corporation has

taken up the marketing in Bangalore. Silver pompano looks and tastes like silver pomfrets and fetches a farm gate price of about Rs 200/kg. The total availability of this high value marine fish in India from marine capture fisheries is about 2 lakh tonnes per year. Such fish are in great demand in all Metros and fetches high prices, particularly during April-July period due to the national trawl ban on East coast and West coast successively. In this context silver pompano's harvest gains lot of importance to aquaculture which can bring lakhs of acres of barren, coastal, saline, low lying lands under culture, thus improving the food production and nutritional enhancement of the country. The harvest was conducted on 17th April, 2012 in the presence of about 300 leading aqua farmers of coastal districts of Andhra Pradesh, local MP and representatives from general public, press and electronic media. The total harvest obtained was 1305 kgs.

(Reported by G. Gopakumar, A. K. AbdulNazar, R. Jayakumar, G. Tamilmani, M. Sakthivel, C. Kalidas, P. Ramesh Kumar & Johnson B. Mandapam Regional Centre)



Harvested Pompano handed over to Karnataka Fisheries Development Corporation



Shri K. Narayana Rao, Hon'ble M.P., Machilipatnam, addressing the gathering



Section of the audience





Onboard Inauguration of open sea cage lobster harvest by Shri. Rajsibhai Jotwa, Hon'ble MLA, Somnath

## Capture based aquaculture of Spiny Lobster at Veraval: A successful demonstration by Veraval RC

The Regional Centre of CMFRI, Veraval carried out a successful demonstration of juvenile lobsters grow out in open sea cages. A total of 2500 numbers of lobsters with an average weight of 80g were collected from local landing centers and stocked in two circular cages of 6m diameter and 4 m net depth in the first week of February, 2012. After a culture period of 110 days, the lobsters reached an average size of 203g with a survival of 93.7%. The total harvest obtained was 272 kg consisting three different size grades.

The harvest of the sea cage farm off Prabhas Patan, Veraval was conducted on 16th May, 2012 in the presence of Shri. Rajsibhai Jotwa, Honourable MLA, Somnath, who inaugurated the harvest.

(Veraval Regional Centre)



Director CMFRI, HOD Mariculture and SEETT Division observed lobster stock in open sea cages off Prabhas Patan



Grading of harvested lobsters



# Small scale sea cage culture:

## A success story from Mumbai RC

Fishermen of village Kalamb requested for small and low cost cage from Mumbai Research Centre for conducting lobster cage culture in open sea. In response to their request Mumbai Research Centre fabricated small G. I. cage frame locally with four barrels for buoyancy. Inner diameter of the cage frame was of 3 m whereas outer diameter was of 4 m and nets were designed in conical to provide more space at bottom for lobster to rest. Cages were moored in the open sea by means of two grapnel anchors. 200 juvenile lobsters collected from Versova landing centre were stocked in the cage (average wet wt. 51.6 gm) in the month of January 2012. Local fishermen took up the responsibility of daily feeding to lobsters with trash fishes from their daily catch. After rearing period of four months lobsters were harvested in the auspicious

presence of Dr. W. S. Lakra, Director and Vice-Chancellor, Central Institute of Fisheries Education, Mumbai. Dr. V. S. Somvanshi, Ex-Director General, Fishery Survey of India, Shri. Vinod Naik, Deputy Commissioner of Fisheries, Faculty members of CIFE and State Fisheries Department Officials also attended the function and addressed fishers regarding the need of mariculture along Maharashtra coast to increase fish production and overcome unemployment issue among rural fishers. A total of 158 lobsters were recovered from the cage after four months rearing (average wet wt. 155 gm). Lobsters were sold to buyers at the rate of ₹ 840 per Kg after harvesting.

(Mumbai Research Centre of CMFRI)



Dr. W. S. Lakra, Director and Vice-Chancellor, CIFE with Dr. Deshmukh, SIC, Mumbai RC



Dr. W. S. Lakra, Director and Vice-Chancellor CIFE, Mumbai addressing the gathering



Fishers expressing their views on open sea cage culture of lobsters at Vasai.







Cobia after 14 months ( 14 Kg weight)

The cobia, *Rachycentron canadum*, is a marine finfish that prevails throughout tropical and sub tropical attitudes and holds only a minor commercial fishery landing. Efforts toward the production of cobia in Southeast Asia can be traced back to the early 1990's. The recent global interest in cobia culture can be linked to various desirable culture characteristics, such as ease of spawning in captivity, excellent growth rates, high post weaning survival and adaptability to cage and tank culture conditions. In addition, cobia readily accepts trash fishes and a wide variety of commercially available feeds. The stagnation of capture fisheries and an ever increasing demand from domestic market for marine fishes are accelerating initiatives to enhance mariculture production from the coastal waters.

Foreseeing the need to increase fish production and to address livelihood issues it was CMFRI's initiative to develop an indigenous technology for Open Sea floating cage culture for various finfishes and shellfishes along the east and west coast of the country. Besides developing cage and mooring technology CMFRI perfected breeding and larval rearing technologies for a number of marine

finfish species to support cage culture in the country.

Cobia represents one of the best potential species for cage farming in open seas. Cobia is a highly prized species across the world, with a tremendous potential for cage farming because of its rapid growth rate and high quality lean flesh. Cobia cage aquaculture was initiated during 2010 period at Karwar Research Centre of CMFRI in the west coast. They are reared in circular open sea floating net cages. These cages are made of GI with a diameter of 6 meter. Cobia juveniles, ranging in size from 13 to 15 cm, with weights of 10 to 15g respectively, were brought from Mandapam Regional Centre of CMFRI on 26-05-2010. The fishes were directly stocked into open sea cages on arrival. A total of 400 cobia juveniles stocked in these cages.

Growth rates were determined by regular sampling and measuring individual lengths (cm) and weights (g). Mortalities were determined by collecting and counting individual dead fish. Fish were fed to satiation at 10% of their total biomass per day with minced fresh sardine meat. Fish were fed twice a day

## Karwar RC demonstrates Marvellous Cobia culture

- 🐟 24 months - 25 Kgs
- 🐟 Average daily weight gain 45 g.
- 🐟 FCR 1: 1.6

(early morning and late afternoon). Food conversion ratio (FCR) was estimated by calculating the ratio between the total weight of food given and the average weight of fish during the respective period. For environmental monitoring water temperature, salinity and dissolved oxygen data were collected and recorded in daily basis from the cage culture site. Cage nets were periodically cleaned or exchanged to reduce fouling and to maintain consistent flow of water through the cage.

During the initial culture period of four months from June to September, 2010 an average daily growth rate of 7.75g was estimated (153 days). In this period the fishes have reached a maximum weight of 1.2kg. From September 2010 to July 2011 the fishes showed an average daily growth rate of 26.35g and with a maximum weight of 10kg. From July, 2011 till May, 2012 the average daily growth rate was 44.78g with a maximum body weight of 24.85kg. At present cobia stock has reached 2 years growth in open sea floating net cages. The average FCR estimated during this culture period was found to be 1: 1.6 with fresh oil sardine as feed.

The experimental farming of cobia conducted at Karwar Research Centre in open sea floating net cages shows that the growth rate achieved is excellent and probably better than that recorded elsewhere.



Cobia after 24 months (1.1 Meter length, 25.6 Kg weight)



Cobia in Cage



## Cobia seed stocking programme by Mandapam RC



A view of Rajullanka farm

A prospective farmer Shri. A.V. Subbu Raju at Rajullanka has taken up demonstration of cobia farming in collaboration with CMFRI. On 15th April 2012, 3000 fingerlings of cobia with the average length of 6.5 cm were stocked at Rajullanka fish farm, which was transported from Mandapam Regional Centre of CMFRI. Initially the cobia seeds were stocked in 12 happas. The seed stocking programme was conducted on 16th April, 2012 in the presence of leading aqua farmers of coastal districts of Andhra Pradesh,



Dr. G. Gopakumar, SIC, Mandapam Regional Centre and Shri. A. V. Subbu Raju releasing the cobia seeds at Rajullanka farm, AP



Dr. G. Gopakumar, SIC, Mandapam Regional Centre along with other scientists handing over the cobia seeds to Shri A. V. SubbuRaju

## Fissiparous reproduction of sea star in research aquarium at Mandapam

The Indo-Pacific shallow water species of Sea star *Linckia multifora* collected from Mandapam coast reared in research aquarium, has shown fissiparous reproduction. This method of asexual reproduction is called autotomy and this is restricted to a very few species of sea stars. It is achieved by shedding an arm which result in comet, and this will further develop into a separate sea star with central disc.

(Reported by  
R. Saravanan and N. Ramamoorthy,  
Mandapam Regional Centre)



Reproduction of fissiparous sea star *Linckia multifora* (Lamarck, 1816)



## Investigation for improving the husbandry practices in pond culture of Cobia at Andhra Pradesh



The pond in which cobia fingerling mortality was observed

During the last week of May 2012, partial mortality of cobia fingerlings stocked at Rajullanka farm was reported. An investigation team consisting of Dr. P. Rameshkumar, Scientist, Shri. G. Hanumanta Rao, T-3 and Shri. P. Rajendran, T-1 visited the farm on 27.05.2012 and reported that the mortality was not due to the disease and suggested to improve the culture.

(Reported by  
P. Ramesh kumar,  
G. Hanumanta Rao and  
P. Rajendran  
Mandapam Regional Centre)



Water, sediment and sterile swab samples collected for analysis

### Successive breeding of Cobia and larval production at Mandapam Regional Centre of CMFRI

In continuation to the first five successful breeding of cobia, sixth successful spawning and larval production was achieved at Mandapam Regional Centre of CMFRI on 14th March 2012. Here the males employed were weighing around 18 kg and 19 kg respectively. The

female employed was around 30 kg. On 12th March 2012, the selected brooders were introduced in to a 100 ton cement tank. The brooders were induced with human chorionic gonadotropin (hCG) at doses of 500 IU per kg body weight for female and 250 IU per kg body weight for males. Spawning was observed at the early hours on 14th March 2012. The total eggs spawned were estimated to be six lakhs and about 50 % fertilization was recorded. The eggs were collected by a 500  $\mu$  mesh and stocked in incubation tanks at varying densities. The eggs hatched after 18-24 hours of incubation at a temperature range of 28-30°C. The larvae as on 26.04.2012 are 44 days old and reached the average length and weight of 9.3cm and 2.56g respectively.

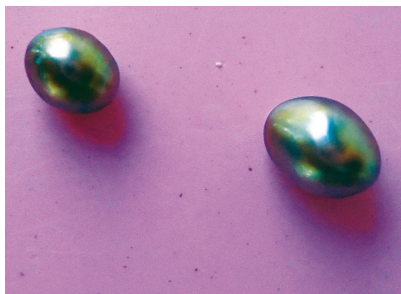
### Transportation of Cobia and Pompano fingerlings to Andhra Pradesh farm

On 28th April 2012, 6000 fingerlings of Cobia with the average length of 9.3 cm were successfully transported from Mandapam Regional Centre of CMFRI to the farm at Komaragiripatnam and Kalipatnam villages of Andhra Pradesh for demonstration.

(Reported by  
G. Gopakumar,  
A. K. Abdul Nazar,  
R. Jayakumar, G. Tamilmani,  
M. Sakthivel,  
C. Kalidas,  
P. Ramesh Kumar & Johnson B.  
Mandapam Regional Centre)

### Black pearls produced through culture; A pioneering successful effort in the country

Under the MoES funded blacklip pearl oyster farming project operated from Port Blair in Andaman and Nicobar Islands, the first pair of cultured black pearls were produced. The oysters *Pinctada margaritifera* were seeded by a Tahitian expert in February 2011 and after more than 300 days, the pearls were harvested. The pearls were oval/baroque in shape, measuring 4.8x3.7 mm and weighed nearly 80 mg. The pearls which were grey-black with golden hue were valued at US\$ 40-50 each. The oysters were held in a sub-surface longline in chaplets with wire mesh cover.



Considering the success of pearl production and hatchery rearing of spat the MoES has extended the project in the 12<sup>th</sup> plan period also.

(Molluscan Fisheries Division)

### Bumper catch of Ghol at Jakhau, Gujarat

Jakhau (23° 14.5' N and 68° 36.5' E) is an important seasonal (September to April) fishing centre in Kutch district of Gujarat. *Protonibea diacanthus*, locally known as 'Ghol' is one of the commercially important fishes on northwest coast of India. The swim bladder of *Ghol*, after sun drying, is processed into clarifying agent, the isinglass, for the beverage industry. The bladder of this species fetches a very high market price owing to its excellent quality. On 24<sup>th</sup> April, 2012 a total of 375 numbers of *Ghol* landed at Jakhau. The catch was caught in Gill net (Multi filaments) which is locally called as "Jada Jaal". As per observation and historical reports, this is the first time bumper landing of *Ghol* fishes in this area. Mr. HasanIsha Bhaya is the fisherman who got the bumper catch of *Ghol* in his Gillnetter craft named "Al Kadari" with 42 feet craft size with 88 hp motor. In a personal interview he told that he got this catch from North-West Shekhranpirs Creek & near Haji Ibrahimdadas Creek with depth of operation 8 - 10 meter. The catch was sold at **₹70, 05,850** which composed of 54.5% of male fishes of



Ghol landed at Jakhau

> 15Kg size which fetches more price in the market compared to the female one. The swimbladder of males are preferred as they had more clarifying property. A catch of 2246 Kg of male and 3218 kgs of female ghol were caught which had a size range of 15 Kg and above. Male fishes of 15 Kg and above were sold at ₹1700/Kg and females were sold at much lower price of ₹ 800/Kg. The purchased fish was brought to Veraval by road in refrigerated containers for further processing.

(Veraval Regional Centre)

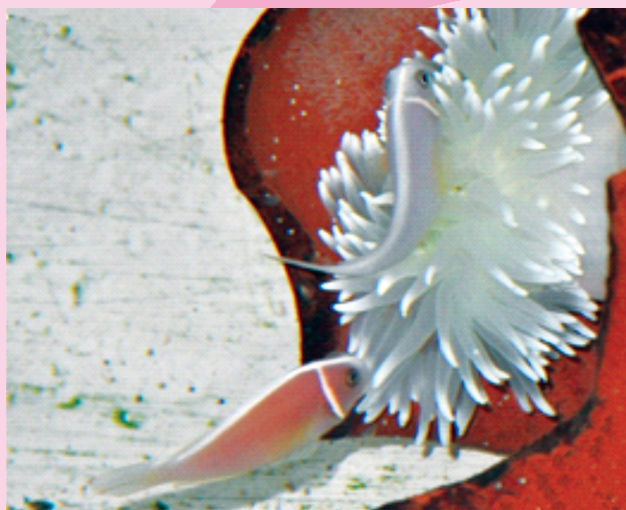
### CMFRI management Advisory on sustainable fisheries:

### Deputy Commissioner bans FAD-based Cuttle fishery from January 2012

- The Representatives of Malpe Fishermen's Association and Deep Sea Fishermen's Association objected to the practice of fishing for cuttlefish using Fish Aggregating Devices (FADs) along the Karnataka coast.
- A meeting was convened by the Deputy Commissioner, Udupi District, in the presence of local MLA, Project Co-ordinator, Malpe Fishing Harbour Project, Assistant Director of Fisheries, Udupi District and fishermen representatives from the mechanized sector and the FAD operators on the 5th November, 2011.
- Fishermen groups engaged in fishing cuttlefish using hook & lines near pre-deployed FADs informed that they had made huge investments for employing labourers, and banning this practice with immediate effect would incur enormous financial loss.
- Deputy Commissioner, Udupi District, informed that Research findings of CMFRI have suggested that fishing of cuttlefish using FADs is destructive to the fishery.
- Hon'ble MLA suggested that in the interest of both the parties, FAD fishing of cuttlefish may be permitted up to the end of January 2012. Thereafter a decision may be taken to ban fishing using FAD.
- In view of the destructive nature of this fishing practice as revealed by studies carried out by CMFRI, the hook and line fishery for cuttlefish using FADs was banned after the end of January 2012. The DC directed the Department of Fisheries to take necessary action to ban the same through out Karnataka coast by a Government Order.



## Two new clown fish species bred under captivity at Vizhinjam Research Centre of CMFRI



Pink Skunk clown (*A. perideraion*) pair with eggs



Clark's anemonefish (*A. clarkii*) pair with eggs

Two new clown fish species namely *Amphiprion perideraion* Bleeker, 1855 (Pink Skunk clown) and *A. clarkii* Bennett, 1830 (Clark's anemonefish) were successfully bred under captivity and are being sold under the ICAR Mega

seed project. *A. perideraion* is considered one of the toughest clown fish to bred under captive conditions. The fecundity ranged from 200 to 250 eggs per clutch in the case of *A. perideraion* and 250 to 300 in the case of *A. clarkii*. The

incubation period was seven days for both species. Both these clown fishes have excellent demand in international market.

(Vizhinjam Research Centre)

## A new and fatal 'neck out disease' recorded among lobsters farmed in small floating sea cages off Kanyakumari coast

Consequent to the successful demonstrations of farming of lobsters by the CMFR Institute, a few farmers have taken up lobster farming in smaller HDPE floating cages along the Kanyakumari coast. Such lobster farming ventures along the coast have started providing export oriented earnings to those engaged in collection of live lobsters and also those engaged in farming. However, a few farmed lobsters in rectangular cage 4.0x2.3x1.4m size have developed inflammation, transparency of the site of inflammation and fluid accumulation below the cephalothorax in the joining area below the end of carapace (behind the thorax) and prior to the beginning of abdominal segments. Protrusion of tissues outside the shell was also noted as the prominent symptom. The length and weight of the moribund lobsters recorded at the culture site was  $128.85 \pm 7.63$  mm and  $65.24 \pm 6.64$  g respectively. Mortality with the additional following symptoms was recorded:

1. Black burn type spots in the central telson as well as bordering pair of uropods on either side
2. Reddening of abdomen and walking legs
3. Rot in appendages and reddening of joints and
4. Blackening at the base of the cut end of the appendages

Considering the symptoms in the diseased and moribund lobsters, the infections could be termed as 'neck out disease'. Four distinct bacteria, moderately sensitive to Gentamycin were isolated and characterized using molecular methods and the gene sequence of one viz., *Bacillus circulans* was deposited in GenBank (Acc No: JQ409560).

(Reported by  
A. P. Lipton, A. Udayakumar,  
A. R. Sarika, M.S. Aishwarya and  
H. Jose Kingsly  
Vizhinjam Regional Centre)



Lobsters with 'neck out disease'



Petechial spots and erosions in telson



### Rare species of sting ray caught in live condition off Chettuva, Thrissur



Live porcupine ray *Urogyrnus asperimus* caught off Chettuva

*Urogyrnus asperimus* commonly known as porcupine ray is a rare species of sting ray in the family Dasyatidae and the only member of its genus. This bottom-dwelling species is found throughout the tropical Indo-Pacific, as well as off West Africa. It favors sand, coal rubble and seagrass habitats in inshore waters to a depth of 30 m. The porcupine ray has a nearly circular,

plain-colored pectoral fin disc and a thin tail without any fin folds. Uniquely within its family, it lacks a venomous stinging spine. However, an adult ray can still defend itself ably with the many large, sharp thorns found over its disc and tail. Unregulated fishing

has led to this species declining in many parts of its range and thus has been listed as Vulnerable by the International Union for Conservation of Nature (IUCN). The species is protected under Schedule I of the Indian Wildlife (Protection) Act, 1972.

A live specimen of female porcupine ray measuring 60.5 cm in disc width was



Porcupine ray *Urogyrnus asperimus*

caught in gill net by fishermen off Chettuva in Thrissur District, Kerala on 25th May 2012. On receiving information from the fishermen, a team from Demersal Fisheries Division, CMFRI visited the site. There were injuries on the body of the ray due to handling and hence the specimen was brought alive to CMFRI marine hatchery complex and was kept in a 5 t capacity FRP tank after giving prophylactic treatments. Though the ray survived in captivity, it succumbed to the injuries after a period of 7 days. Tissue sample has been collected for DNA barcoding and genetic analysis.

(Demersal Fisheries Division)

## Extension Activities

### Self Help Group (SHG) on value addition at Mandapam



SHG women involved in fish processing

A SHG "Marina" which comprised of 10 female members at Mandapam, Tamil Nadu established a fish processing unit. They have been financially assisted by the Government, Non-Governmental Organizations (NGOs) and banks. A group of five members is eligible to avail ₹1.00 lakh as loan. Out of this ₹1.00 lakh, ₹50,000 is given as subsidy through the concerned promoting agency. Remaining ₹50,000 is availed by the members through bank loan at nominal interest, which has to be repaid within one to two years. They have developed ready to fry squid, anchovy, sardine, prawns and seer fish. They also developed prawn and seer fish pickles. They are confident that through this activity they could be free from the hands of private money lenders and can substantially improve their livelihood.

(Reported by

Johnson, B. and G. Gopakumar, Mandapam Regional Centre)

### Visakhapatnam RC Participated in 7<sup>th</sup> Aqua Tech Expo-2012

CMFRI participated in the 7<sup>th</sup> Aqua Tech Expo-2012 at Amalapuram, East Godavari District, Andhra Pradesh from 15<sup>th</sup> to 16<sup>th</sup> May, 2012. Shri. P. Viswaroop, Honorable Minister of Fisheries, Govt. of Andhra Pradesh visited the CMFRI pavilion and appraised of the latest technologies and products developed by CMFRI and on culture demonstrations of Pompano and Cobia in West Godavari. The staff of Visakhapatnam RC of CMFRI, Visakhapatnam led by Dr. Shubhadeep Ghosh, Sr. Scientist attended the expo by installing CMFRI pavilion.



Shri. P. Viswaroop, Honorable Minister of Fisheries, Government of Andhra Pradesh visiting the stall of CMFRI.



## Permanent Laboratory cum Office Building for Mangalore RC inaugurated

The new Laboratory cum Office building of the Research Centre of CMFRI, Mangalore was inaugurated by Dr. S. Ayyappan, Hon'ble Director General, ICAR and Secretary, DARE on 13<sup>th</sup> April 2012 in the presence of Dr. Suresh S. Honnappagol, Vice Chancellor, KVAFSU, Bidar; Dr. B. Meenakumari, Deputy Director General (Fisheries); Dr. G. Syda Rao, Director, CMFRI; Prof. K. M. Shankar, Dean, College of Fisheries, Mangalore; Prof. H. P. C. Shetty, Former Dean, College of Fisheries, Mangalore ; Dr. A. P. Dineshbabu, the Scientist-in-

Charge, R.C. of CMFRI, Mangalore and present and former staff of the Research Centre of CMFRI, Mangalore.

Officials from the Department of Fisheries, Karnataka Fisheries Development Corporation, Govt. of Karnataka; Officials of the Dakshina Kannada and Udupi Fish Marketing Federation; Faculty and students of the College of Fisheries, Mangalore; Officials from CPWD, Fishermen, Aquafarmers and their union leaders also were present for the inaugural function.

Inauguration by Dr. S. Ayyappan, Secretary, DARE and Director General, ICAR, New Delhi

### *The new postal address*

Mangalore Research Centre of CMFRI, Technology Wing Campus of College of Fisheries, P.B.No. 244, Hoige Bazar, Mangalore-575 001, Dakshina Kannada, Karnataka, India.



Inaugural address by Dr. S. Ayyappan, Hon'ble Director General, ICAR



Presidential address by Dr. B. Meenakumari, DDG, (Fisheries), ICAR





Inauguration of the building by Director General, ICAR



Welcome address by Director

## World Environment Day Celebrations at CMFRI

### At Headquarters: CMFRI to promote 'Green Economy' in Coastal Village

CMFRI, Kochi supported by science promoters like Marine Biological Association of India, the World Wide Fund for Nature (WWF, India), and the Petronet LNG organized 10 collective events to promote eco-friendly activities to motive villagers to be a partners in Green Economy drive on June 05, 2012 at Cherai Village in Vypin Island of Kerala, India.

Cherai is a coastal village where the marine ecosystem supports the livelihood of the majority of villagers through a multitude of activities like fishing, aquaculture and tourism. It is important that the negative impacts of these anthropogenic activities are made



Inaugural function

known through public awareness and participation.

**Motivating children to be Builders of Green Village :** On June 5<sup>th</sup> nearly thousands of school children and teachers pledged to conserve and protect nature in their own schools. This is the first mass event in the nation where school children pledge for the environment.

**Citizens Pledge :** Nearly 400 Citizens vowed to adopt a responsible life style for promoting green economy.

**Installation art to promote awareness on proper waste disposal :** The impressive 3 m tall monstrous

octopus getting a stranglehold on our lives was created by sculptor Mr. Pramod using 125 kg of plastic bottles and litter. The waste that we throw away so casually will become life threatening to us in future was the message conveyed.

**Developing a Bio-shield:** Mangroves destruction is rampant due to urbanization and on this day 5000 propagules of local mangrove were collected and planted in bio-pouches by villagers for eventual mangrove restoration.

**Thematic live painting :** Renowned artist and national award winner Mr. T. Kaladharan did a live painting on the theme of green economy in front of children and the public. Hundreds of children participated in a painting competition and prizes were distributed to the best.



Installation art of an Octopus created using discarded plastic bottles at Cherai



**Live poem on the theme green economy:** National award winning litterateur Mr. Sippi wrote a poem on green economy village and made everybody recite it.

**Empowering women for taking up zero-carbon budget aquaculture activity :** Women-folk of the village were empowered to take up farming of oysters, a zero carbon aquaculture technology developed by CMFRI.

**Awareness on eco-friendly fishing techniques and green technologies :** An exhibition of eco-friendly fishing implements and green technologies like rainwater harvesting, vermicomposting, terrace farming, organic manures and weed based products was organised. This was witnessed by more than 5000 people.

**Social forestry:** Nearly 1000 saplings of common trees were distributed to villagers.

### Cycle expedition

One of the villagers, Mr. Deepalan, started on a cycling expedition to Goa, nearly 800 km to the north of Cherai Village, spreading the message of green economy to thousands of people enroute.



Signature campaign during World Environment Day 2012



Planting of Mangrove propagules



Pledge taking by citizens at Cherai beach



Pledging for clean and green environment on occasion of World Environmental Day celebration at Mumbai RC



World Environment Day celebration at Visakhapatnam RC



A group photo of participants on World Environment Day 2012 (CIFT & CMFRI Veraval RC)



Planting tree saplings on the world environment day at the Marine Hatchery cum Quarters complex, Calicut.



## The World Oceans Day celebrated at Mangalore RC



World ocean day celebration at Mangalore RC

The World Oceans Day was celebrated on 8th June 2012 at the Mangalore Research Centre of CMFRI, Mangalore by designing a poster on the importance of oceans to human life and the need to protect and conserve the

marine biota. The poster was distributed to all schools to create awareness among the youth on the importance of celebrating the World Oceans Day in line with this year's theme - 'Youth: the next wave of Change'.

In connection with the world environment day, planting of tree saplings in the Marine Hatchery cum Quarters Complex, was organized with full participation of entire staff on 5-6-2012

## Generating awareness on Marine Environment: Painting Competition



Certificate distribution - painting competition at Cherai

The Fishery Environment Management Division of CMFRI organized a painting competition for children aged between 5-20 years on 22nd March 2012 as a part of creating awareness in coastal communities on

the importance of 'Coastal Environment Protection' along with Elakunnappuzha Grama Panchayat. 69 students from more than 15 schools participated in the painting competition. Shri. C.B. Shibu,

renowned artist distributed the participation certificates. The paintings by students of the senior category depicted the impact of non biodegradable wastes in the fishing area and on the artisanal fishers.



A painting by a school student

## Women's Cell organized a special lecture at Kochi



Smt. B. Bhadra, Dy. Mayor, Cochin Corporation addressing the audience

The women's Cell, CMFRI organized a special lecture on "Women at Work Place and in Public Administration" by Mrs. B. Bhadra, Hon. Deputy Mayor, Corporation of Cochin on 11th May, 2012 at 3 pm at CMFRI, Kochi. Dr. G. SydaRao, Director, CMFRI, presided over the function.

## Initiation and base line study of 'sidi' adivasi tribes of Gujarat



Dr. G. Syda Rao, Director CMFRI, HOD Mariculture, HOD SEETTD & Chairman TSP implementation. Preliminary discussions with 'Sidi' adivasi tribal society president and members



## Samudriya Krishi Vigyan Mela

An awareness programme on mariculture conducted.



Lighting the Inaugural Lamp for "Samudriya Krishi Vigyan Mela"

The successful harvest of lobster sea cage farm was followed by an awareness programme 'Samudriya Krishi

Vigyan Mela' on 16th May 2012 at sea off Prabhaspatan. The Mela was attended by local fisher folk, students of fisheries

college, members of SHGs, Exporters, members of the Tribal Community etc in which Shri. Hasambhai Musangara, President of Bharat Adimjuth Matsyadhyog Sahakari Mandali, who actively participated with CMFRI in the open sea cage farming of lobster, shared his experiences on "Samudriykrishi - pinjaro me teetanpaalan" to the audience and on behalf of society he was felicitated with the harvested lobster by the Honorable MLA, chief guest of the day. Shri Ravibhai Gohel, Vice chairperson, Veraval Patan municipality, Dr. A.Y. Desai, Dean College of fisheries, Dr. Rajendra Bodonia, SIC, Veraval research centre of CIFT, Dignitaries from MPEDA, Shri. Jayabalan, Dy. Director, EIA, Shri Kisenbhai Fofondi, President, Seafood exporters' association of Gujarat, Shri Tulsibhai Gohel, President and trawler boat owners' association, Veraval were the other dignitaries present.

## Official Language Implementation



Shri Rakesh Kumar, Chief Administrative Officer receiving the Trophy from Shri Kaushal Kumar Sharma, IRS, Commissioner of Income Tax

CMFRI Cochin bagged Rajbhasha Rolling Trophy (1st Position) of Kochi Town Official Language Implementation Committee for the best implementation of Official Language during 2011-12. In the meeting held at Income Tax Office, Cochin on 29.03.2012 Shri. Rakesh Kumar, Chief Administrative Officer received the Trophy from Shri. Kaushal Kumar Sharma, IRS, Commissioner of Income Tax.

## Hindi Workshop - Headquarters

With a view to encourage the staff to work more and more Hindi and to comply with the assurances given to the Committee of Parliament on Official Language inspected on 29.10.2011, a Hindi workshop was organized at CMFRI Headquarters, Cochin on Functional Hindi during 5, 6 & 7 June, 2012. Total

19 Officers and staff members from Scientific, Technical and Administrative category attended the workshop. On the basis of interaction it was decided to follow up the active users by providing necessary reference materials and further training.

### Karwar Research Centre

A one day Hindi workshop was conducted at Karwar Research Centre

of CMFRI, Karwar on 17.03.2012 on Hindi Grammar and correspondence. Total 17 Officers and staff attended the workshop.

### OLIC Meeting

The quarterly meeting of Official Language Implementation Committee of the Institute was held on 23rd June, 2012 under the chairmanship of Director, CMFRI, Cochin.





Dr. S. Ayyappan releasing the first e- book. Dr. B. Meenakumari DDG (Fy), Dr. Madan Mohan ADG (Fy) and Dr. G. Syda Rao, Director, CMFRI are also seen.



## The first e-book of CMFRI on Herbarium of Common Seaweeds and Seagrasses of India released

CMFRI presents a unique collection of Seaweeds and Seagrasses as e-book. This splendid collection of Herbaria is now being displayed in the Marine Biodiversity Museum of CMFRI, a Designated National Repository. One copy of this herbarium is displayed at NASC Museum, New Delhi.

Forming a major component of the collections in the Museum, the seaweeds and seagrasses evinced a lot of interest among visitors due to their importance as a source of food, fodder, industrial products and bioactive compounds. Herbaria have been bound with 18

species of green algae, 12 species of brown algae and six species of seagrasses as Vol. I and 34 species of red algae as Vol. II. Of the herbaria, 72 species of seaweeds and seven species of seagrasses have also been displayed in the Museum at Cochin.

The Honourable Secretary, DARE and Director General, ICAR Dr. S. Ayyappan has released the first e-book on herbarium of Common Seaweeds and Seagrasses of India at New Delhi on 30th April 2012. This herbarium retains

the original colour of the species. The entire collection is digitized and compiled as e-book, first of its kind for the benefit of students and researchers and would be of immense use to those engaged in plant taxonomy and biodiversity studies.

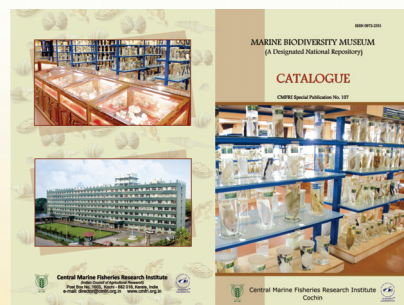
For free download

<http://eprints.cmfri.org.in/8947/>

<http://eprints.cmfri.org.in/8948/>

## Marine Biodiversity Museum Catalogue CMFRI Special Publication No. 107, 2012, 85 pp.

A catalogue of 1614 specimens available in the Marine Biodiversity Museum of CMFRI (Designated National Repository) at Kochi is published. Scientific names are given as per the guidelines given by International Code of Zoological Nomenclature (ICZN). The specimens are listed phylum-wise arranging family, genera and species in alphabetical order with the assigned accession numbers. The index is given family-wise and species-wise. The



Marine Biodiversity Museum Catalogue Cover

Catalogue can be accessed at <http://eprints.cmfri.org.in/8922>



## Workshop Organized at Mangalore RC



Participants in the workshop

A two day workshop on Techniques and methodologies in finfish and shellfish biology was held at the Mangalore Research Centre of CMFRI for Scientists, Technical Staff and Scholars of the Research Centres of CMFRI at Veraval, Mumbai, Karwar and Mangalore.

## Writershop on "Indigenous Technical Knowledge of Fisherfolk on Climate Change"

A three day writershop on 'Indigenous Technical Knowledge of Fisherfolk on Climate Change' was organized during 22-24 March 2012 at Mangalore Research Centre of CMFRI, Mangalore for Scientists, Technical staff and scholars associated with NICRA Project.



## Methodology workshop

Methodology workshop for the 12th plan projects for SEETT Division" was conducted at Tuticorin RC during 17th to 20th May 2012.



Methodology workshop for the 12th plan projects for SEETT Division is in progress



Members of SEETT Division from HQ visited the Hatcheries at TRC of CMFRI at Tuticorin.

## Training on "Open sea Cage culture of Marine fin fishes"

Training on "Open sea Cage culture of Marine fin fishes" was conducted at Visakhapatnam RC from 12th -18th March, 2012. About 30 participants have taken part in this training under NICRA project.

Training on 'Taxonomy of marine fishes' was conducted at Visakhapatnam RC from 19<sup>th</sup>-24<sup>th</sup> March, 2012. About 30 participants have taken part in this training under NICRA project.



## Training on e-publication at CMFRI, Kochi

Second training on e-publication was organized for the Editorial Committee members of the Indian Journal of Fisheries during 17<sup>th</sup> and 18<sup>th</sup> May 2012 at CMFRI, Kochi. Dr. Aruna T. Kumar and Mr. Himanshu Varshney, from the Directorate of Information and Publications of Agriculture, ICAR, New Delhi served as Resource Persons.



## KVK farmer received National Award from Prof (Dr.) M.S. Swaminathan



KVK farmer receiving the Plant Genome Saviour Community Award 2012 from Prof. (Dr.) M.S. Swaminathan

KVK farmer Mr. Jose Mathew, Kochukudy, Kalloorkkad, Moovattupuzha received National recognition from Protection of Plant Varieties and Farmers Rights Authority (PPV & FRA), Govt of India. The award namely "Plant Genome Saviour Community Award 2012- Individual recognition category" was conferred to him on the basis of the study, documentation and recommendation by KVK (Ernakulam) about his efforts in conservation of a high yielding Nutmeg variety "kochukudy", which is popular among the nutmeg farmers in Ernakulam and adjoining districts.

## KVK promotes high density inland cage culture



Demonstration of cage culture in abandoned ed granite quarry in Kothamangalam

KVK has introduced interventions in Eastern parts of the district where abundant fresh water resources are available. A NICRA sponsored training programme on *High density fish culture in abandoned fresh water resources* at Kothamangalam received good response from farmers. In addition, a portable carp hatchery has been installed at a progressive farmer's field at Kothamangalam with a view to produce good quality carp seeds locally.

## KVK trainees established a commercial plant nursery



Arunima nursery KVK trained SHG unit

KVK trained Women self help group (Kudumbashree)-Arunima, Okkal, Kaladyhas started a new plant nursery

near Okkal junction on May 15, 2012. The nursery, equipped with a variety of ornamental plants, vegetables, tree grafts

etc. is gaining popularity in the area. KVK is monitoring and providing necessary technological backstopping for this group of five unemployed women.

### Indian Journal of Fisheries gets Impact Factor

We are happy to announce that Indian Journal of Fisheries has got Impact Factor for 2012 for the first time. Thomson Reuters have included our journal in the Science Citation Index on 2010. Now IJF is listed in the IF list.

**Impact Factor for IJF - 0.04**



### Dr. G. SydaRao, Director

- Attended the inauguration of Mangalore Office-cum-Laboratory building of CMFRI on 13.04.2012
- Attended the inauguration of maiden harvest of farm grown silver pompano at Antervedi, Godavari, Andhra Pradesh on 17 April 2012
- Attended the meeting convened by DG, ICAR and DDG (Fy.), ICAR, New Delhi during 28-30 April 2012.
- Attended the AICRP Stakeholder meeting at Veraval during 5-8 May 2012
- Visited Karwar Research Centre of CMFRI during 23-24 May 2012

### Dr. (Mrs.) V. Kripa, HOD, FEMD

Attended the PME meeting of open sea mussel farming project funded and organized by NABARD on 17.04.2012 at Kasaragod.

### Dr. K.K. Vijayan, HOD, MBTD

- Attended and presented an invited paper in the "National Conference on Aquaculture: Fish for Billion" organized by CIFA, Bhubaneswar on 15-16<sup>th</sup> March 2012
- Attended and made presentation on 'Current status of marine finfish and shellfish in India' in the National consultation on "Development of surveillance programme at NBFGR, Lucknow.
- Participated and presented country report on 'Population Genetics and Lab capabilities' at the Eight Nation Bay of Bengal Large Marine Ecosystem (BOBLME) governing group meeting on Indian mackerel working group at Colombo, Sri Lanka during 28-29 May 2012.

**Dr. R. Narayanakumar**, HOD SEETTD, Attended the Fisheries Division Meeting convened by the Secretary, DARE and Director General ICAR to discuss the EFC preparation for the 12<sup>th</sup> Five Year Plan at New Delhi 30<sup>th</sup> April 2012.

- Attended the TSP meeting held at Veraval Regional Centre of CMFRI during 6<sup>th</sup> to 8<sup>th</sup> May 2012.
- Attended the XXIII Meeting of the Regional Committee No.VIII held at Tamil Nadu Agricultural University, Coimbatore, 16<sup>th</sup> June 2012.

### Dr. Prathibha Rohit at Columbia

Dr. Prathibha Rohit, Senior Scientist attended the 'MTI 2012 Avian and Marine Tracking Conference' at Columbia, Maryland organized by Microwave Telemetry, Inc., from 27<sup>th</sup>-30<sup>th</sup> March 2012.



### Dr. Geetha Sasikumar at Dept. of Primary Industries, Australia

Dr. Geetha Sasikumar, Scientist (Sr. Scale), attended Training on "Age estimation of squid and fish" at the Department of Primary Industries (DPI), Fisheries Victoria, Queenscliff, Australia from 23<sup>rd</sup> March to 1<sup>st</sup> April 2012 under the NAIP project "Utilization strategy for oceanic squids (Cephalopoda) in Arabian Sea: A value chain approach".



**Dr. R. Narayanakumar** and **Dr. Vipinkumar. V.P.** participated in the inauguration meet of the Business Incubation Meet of ZTMBPDU accomplished by the Director General, ICAR at CIFT on 5<sup>th</sup> April 2012.

**Dr. P. U. Zacharia**, Head, DFD, attended the Annual Review Meeting of the NICRA at CRIDA, Hyderabad during 12-14 June 2012.

**Dr Vinay D. Deshmukh**, Principal Scientist & Scientist-in-Charge Mumbai RC.

- Attended a meeting with ShriMadhukarChavan Hon. Minister (DAHD & Fish) in Mantralaya on 14.05.2012 and discussed about the regulation of marine fisheries in the state.
- Report of the study committee on the status of purse seine fishing and its impact on traditional fishing and ecology along Maharashtra coast May 2012 by V.S. Somvanshi, V.D. Deshmukh, S.K. Chakaborty, M.M. Shirdhankar, R. Patil. V. V. Naik, S.N. Gandage and S. S. Kulkarni, submitted to Govt. of Maharashtra Department of Animal Husbandry, Dairy Development and Fisheries, Mumbai.

**Dr. G. Maheswarudu**, Principal Scientist and Scientist-in-Charge and **Dr. Shubadeep Ghosh** participated in an interface meeting inviting technology developed by ICAR Institutes and stake holder departments pertaining to Andhra Pradesh for production enhancement, at CRIDA, Hyderabad on 21<sup>st</sup> April, 2012.

- **Dr. Biswajit Dash**, Technical Officer attended meeting cum installation of cage in the experimental tank at IIT, Kharagpur, W.B. on 11<sup>th</sup> May, 2012.

**Dr. Veerendra Veer Singh**, Principal Scientist, attended CIC meeting and Review Workshop of GEF funded subprojects at NASC Complex, New Delhi from 14.05.2012 to 17.05.2012.

- Participated in meeting number 7 of the JNPP Committee at Bombay Natural History Society on 04.06.2012.
- Participated as nominated member in the ballast water committee meeting at DG shipping office on 07.06.2012

**Dr. A. P. Dineshbabu** and **Dr. K.M. Rajesh**, Senior Scientists attended the talk on 'Molecular Evolutionary approaches to understanding Biology, delivered by Dr. Sudhindra R.Gadagkar,



Alumnus College of Fishereis, Mangalore at Prof. HPC Shetty Seminar Hall, Mangalore, 6th June 2012.

**Dr. C. Ramachandran**, Senior Scientist attended the meeting convened by Joint Director(Fy) at Krishi Bhavan, New Delhi on 26 June, 2012 to discuss the agenda for FAO - COFI, 2012

**Dr. K. S. Sobhana**, Senior Scientist participated in the National Workshop on Fish Cell line development and storage at NBFGR, Lucknow on 19<sup>th</sup> April 2012.

**Shri. N.K. Sanil**, Scientist, attended the National consultation on "Development of surveillance programme for Aquatic Animal Diseases" during 17-18 April 2012 at NBFGR, Lucknow.

**Dr. P. Laxmilatha**, Senior Scientist presented the project proposal on "Development of an ecosystem based pelagic fishery forecast system" to INCOIS, Hyderabad, at the annual review meeting at International centre, Goa on 21<sup>st</sup> March, 2012.

**Dr. R. Jeyabaskaran**, Senior Scientist, participated and presented a paper in the National Consultation Workshop on "Coastal and Marine Biodiversity: Gaps, Challenges & Opportunities" jointly organized by Ministry of Environment & Forests, Government of India and GIZ on 12-13 April 2012 at Gandhi Nagar, Gujarat.

- Attended a meeting regarding "Marine EIA study for Kudankulam Nuclear Power Plant" on 10<sup>th</sup> May 2012 at New Delhi.
- Participated on deputation in the BOBLME SAP Indicators Workshop on 'Marine Living Resources' on 30-31 May 2012 held at Phuket, Thailand.
- Attended the XXIII Meeting of ICAR Regional Meeting No. VIII held at Tamil Nadu Agricultural University (TNAU), Coimbatore on 15-16 June 2012.

**Dr. Shubhadeep Ghosh**, Senior Scientist and **Dr. Biswajit Dash**, Technical Officer attended the project inception meeting on Hilsa under

NFBSFARA project at CIFRI, Barrackpore, Kolkata from 31<sup>st</sup> May to 7<sup>th</sup> June, 2012.

**Shri. Mohammed Koya K.**, Scientist-in-Charge and Smt. Swatipriyanka Sen, Scientist attended the state level seminar on "Aquaculture development of Gujarat" arranged by College of Fisheries, Veraval on 31<sup>st</sup> May, 2012 and Smt. Swati Priyankasen presented on the topic "Role of Research Institutes in Aquaculture development of Gujarat".

**Shri. Mohammed Koya K.**, Scientist-in-Charge, **Shri. Sreenath K.R.**, Scientist, **Shri. Gyanaranjan Dash**, Scientist, **Smt. Swati priyankasen**, Scientist attended Krishi Mahotsav at Porbandar on 28<sup>th</sup> May, 2012.

**Dr. Kajal Chakraborty**, Scientist, participated and presented CMFRI Component on "High value compound/ phytochemicals" in the platform group meeting on "High value compounds" in Directorate of Medicinal and Aromatic Plant Research, Anand, Gujrat during 3-4 May 2012.

## IRC Meeting

The 19<sup>th</sup> Institute Research Council (IRC) Meeting was held in Head Quarters at Kochi from 26<sup>th</sup> - 30<sup>th</sup> June 2012 under the Chairmanship of Dr. G. Syda Rao, Director, CMFRI. The new projects presented by the PIs were also evaluated and recommended by IRC for implementation during 2012-2013.



## Visit of National Director, NAIP, New Delhi



Dr. Bangali Baboo looking at the oceanic squid and oyster products developed under NAIP at NIFPHATT fish stall

Dr. Bangali Baboo, National Director, NAIP, New Delhi visited the project sites of the CMFRI operated NAIP schemes on oceanic squid and

shellfish mariculture on 15<sup>th</sup> April 2012. Dr. Baboo reviewed the progress of work in these projects and visited the processing facilities for oceanic squids

## Visit of Dignitaries



Dr. Bangali Baboo looking at the converted squid jigger MV Titanic

and oysters in NIFPHATT, Kochi. Dr. Baboo also showed keen interest in the Vessel MV "Titanic" which is a trawler converted into a jigger under the project.



## Dr. E. Vivekanandan retires

Dr E. Vivekanandan acquired M.Sc. degree (Marine Biology, Annamalai University) in 1972 and Ph.D. degree (Fish Energetics, Madurai University) in 1976. He joined Indian Agricultural Research Service as Scientist in Central Marine Fisheries Research Institute in 1976. Since then, he served CMFRI as Senior Scientist and Principal Scientist and in different capacities for 35 years, which include Head, demersal Fisheries Division and Scientist-in-Charge, Madras Research Centre of CMFRI. His core areas of research were fish stock assessment, marine ecosystem modeling, marine mammals, coastal fisheries management, and climate change. His contributions include fisheries management advisories,

regional collaboration on marine fisheries in south and southeast Asia with organizations such as FAO, Bay of Bengal Large Marine Ecosystems, Bay of Bengal Programme - Intergovernmental Organisation and World Fish Center. On invitation, he served as Fisheries Team Leader in the UN Project "Oceanographic Survey in Support of Damage Assessment" at King Fahd University of Petroleum & Minerals, Dhahran, Saudi Arabia for one year in 2003. He has widely travelled and has served in several government constituted committees. He was Editor, Journal of Marine Biological Association of India during 2008-2011. He has supervised Ph.D. research programmes and five students acquired doctoral degree of



Madras University under his guidance. He has authored 157 publications, which include 67 research papers in peer-reviewed journals, 15 books/chapters and a number of national and international technical reports. He retired on superannuation as Principal Scientist & Scientist-in-Charge, Madras Research Centre of CMFRI on April 30, 2012.



Smt. N. Ambika  
Private Secretary,  
Hqrs., Cochin  
30-4-2012



Smt. K.C. Girija  
Asst. Admin. Officer,  
Visakhapatnam R.C  
30-4-2012



Smt. K. Santha  
Asst. Admin. Officer,  
Vizhinjam R.C  
30-4-2012



Shri. K. Anandan  
T-5 (Technical Officer)  
Hqrs., Cochin  
31-5-2012



Shri. M. Chandrasekhar  
T-5 (Technical Officer)  
Visakhapatnam R.C  
30-6-2012



Shri. N. Natarajan  
Assistant  
Mandapam RC  
30-4-2012



Shri. T.V. Shaji  
T-I (Field Assistant)  
Hqrs., Cochin  
31-5-2012



Shri. M. Govindaraj  
SSS  
Mandapam RC  
30-4-2012



Shri. M. Athimoolam  
SSS  
Mandapam RC  
30-4-2012



Shri. B. Zainudheen  
SSS  
Hqrs., Cochin  
31-5-2012



Shri. N.V. Thambi  
SSS  
Hqrs., Cochin  
31-5-2012



Shri. P.V. Joy  
SSS  
Hqrs., Cochin  
31-5-2012



Shri. K. Kunjuraman  
SSS  
Hqrs., Cochin  
30-6-2012

### APPOINTMENTS

| Name                               | Designation   | Center           | w.e.f      |
|------------------------------------|---------------|------------------|------------|
| 1. Dr. K.M. Rajesh                 | Sr. Scientist | Mangalore RC     | 28.03.2012 |
| 2. Dr. T. Senthil Murugan          | Sr. Scientist | Karwar RC        | 04.04.2012 |
| 3. Shri L. Ranjith                 | Scientist     | Tuticorin RC     | 27.04.2012 |
| 4. Shri N. Venkatesh Rajendra Naik | Scientist     | Visakhapatnam RC | 27.04.2012 |
| 5. Smt. Swathi Priyanka Sen        | Scientist     | Veraval RC       | 27.04.2012 |
| 6. Shri S. Ramkumar                | Scientist     | Mumbai RC        | 30.04.2012 |
| 7. Shri Pralaya Ranjan Behra       | Scientist     | Visakhapatnam RC | 30.04.2012 |
| 8. Smt. Indira Divipala            | Scientist     | Madras RC        | 27.01.2012 |

### Assumption of Charges

Dr. K. Vinod, Sr. Scientist, Madras Research Centre of CMFRI has assumed the charges of the Scientist-in-charge, Madras Research Centre of CMFRI, Chennai w.e.f. 01.05.2012.

### PROMOTIONS

| Names & Designation  | Promoted as                      | Center        | w.e.f      |
|--|----------------------------------|---------------|------------|
| 1. Smt. N.R. Letha Devi, Personal Assistant, Hqrs., Cochin | Private Secretary                | Hqrs., Cochin | 04.04.2012 |
| 2. Shri S. Erishikesan, Assistant, Vizhinjam RC            | Assistant Administrative Officer | Vizhinjam RC  | 01.05.2012 |
| 3. Smt. G. Abitha Assistant, Madras RC                     | Assistant Administrative Officer | Madras RC     | 02.05.2012 |

### TRANSFERS

| Name & Designation                      | From            | To            | w.e.f.     |
|---|-----------------|---------------|------------|
| 1. Dr. V. Srinivasa Raghavan, Scientist | CMFRI, Cochin   | Madras RC     | 28.03.2012 |
| 2. Dr. K. Vinod, Sr. Scientist          | Mandapam RC     | Madras RC     | 31.03.2012 |
| 3. Shri Rishikesh Aandi, Assistant      | Madras RC       | Mangalore RC  | 09.04.2012 |
| 4. Shri. V. Vaithinathan, T-5 (TO)      | Nagapattinam FC | CMFRI, Cochin | 15.05.2012 |
| 5. Shri V.A. Leslie, T-5 (TO)           | Madras RC       | Vizhinjam RC  | 04.06.2012 |

### Voluntary Retirement

| Name                    | Designation | Centre        | w.e.f.          |
|-------------------------|-------------|---------------|-----------------|
| 1. Shri C.S. Sasidharan | T-5 (TO)    | CMFRI, Cochin | 02.01.2012 (FN) |
| 2. Shri N.K. Mohanan    | Assistant   | KVK, Narakal  | 10.04.2012 (FN) |

### Meetings

16th meeting of the Research Advisory Committee of CMFRI held on 26<sup>th</sup> & 27<sup>th</sup> March 2012 at CMFRI, Cochin.

## Ph.D. awarded

Dr. Sandhya Sukumaran, Scientist, MBTD has been awarded the Ph.D degree

for her thesis entitled "Genotoxic responses and population level effects of mutagen exposure in sexual and parthenogenetic Artemia" by University of East Anglia, England.





# Marine Fisheries Census 2010 Released



Dr. S. Ayyappan, Director General, ICAR releasing the report of Marine Fisheries Census 2010

The Marine Fisheries Census 2010 reports were released by Dr. S. Ayyappan, DG, ICAR on 5<sup>th</sup> May, 2012 at CIFT, Cochin. The report consists of Part-I All India and Part-II in eleven volumes for nine maritime states and Union Territories of Puducherry and Daman & Diu.

There are 3,288 marine fishing villages and 1511 marine fish landing centres in 9 maritime states and union territories. The total marine fishermen population is about 4.0 million comprising in 8,64,550 families. Nearly 61% of the fishermen families are under BPL category. The average family size is 4.63 and the overall sex ratio is 928 females per 1000 males. Almost 58% of the fisherfolk are educated with different levels of education. About 38% marine fisherfolk are engaged in active fishing with 85% of them having full time engagement. About 63.6% of the fisherfolk are engaged in fishing and allied activities. Nearly 57% of the fisherfolk engaged in fish seed collection are females and 43% are

males. Among the marine fishermen households nearly 76% are Hindus, 15% are Christians and 9% are Muslims. The overall percentage of SC/ST among the marine fishermen households is 17%. Nearly 32% of the adult fisherfolk have memberships in co-operatives. Among the marine fishermen households 1,31,012 families are having life saving equipments. In the marine fisheries sector there are 1,94,490 crafts in the fishery out of which 37% are mechanized, 37% are motorized and 26% are non-motorized.

Out of a total of 1,67,957 crafts fully owned by fisherfolk 53% are non-motorized, 24% are motorized and 23% are mechanized. Among the mechanized crafts fully owned by fishermen 29% are trawlers, 43% are gillnetters and 19% are dolnetters.



## cadalmin

CMFRI Newsletter

Cadalmin, the CMFRI Newsletter is a quarterly publication of the Central Marine Fisheries Research institute, Cochin. The publication gives an insight into the major events of the quarter, besides highlighting the salient findings in the research front and dissemination of technological know-how to the farming community.

केंद्रीय समुद्री मत्स्यिकी अनुसंधान संस्थान  
CENTRAL MARINE FISHERIES RESEARCH INSTITUTE  
कडलमीन™  
cadalmin